

Control of the Abundance.—The larvae of *brassicæ* resisted the cold better than those of the other *Pierinae*, which we have reared. The heat killed all the larvae of the third brood which hatched in May (18) and the species was carried on by the dormant pupae (14, 15, 26). Those which pupated in the open country should have died when, in summer, the temperature of the barren soil reached sometimes 150°, according to the data of the Weather Bureau, and only the chrysalids lying in the most sheltered and moist places were able to resist. In winter the pupae were not injured by the cold either at Lisbon (min. 32°) or Salonika (min. 28°). The climatic factors would not be sufficient to balance the great fertility of *brassicæ* and a severe control is effected by the parasites which kill the larvae (4), and by the ants and other insects which eat the pupae.

Some Cumberland Sawflies.

By T. F. MARRINER.

This has no pretension of being regarded as a County List. It is merely an account of such sawflies as I have come across whilst hunting Coleoptera. The area covered in my outings is enclosed by a line from the coast near Maryport through Penrith to the Pennines, along the Northumberland and the Scottish Border lines to the Solway. This is the northern plain of the county. The collecting dates from 1921 to a couple of years ago. During a portion of that period I lived not far from the late Mr. G. B. Routledge and I was his companion and pupil on many a pleasant excursion. It was, indeed, Mr. Routledge who originally advised me to take such insects as bees, sawflies, etc., as I came across them, and he advised me as to where I could get my captures named. To him, to Dr. Perkins and others I owe a deep debt of gratitude for kindly help and encouragement.

When I came to go over my little collection of the Sawflies for the purpose of writing up a list for the *Ent. Record*, I found that, since some of my captures had been named for me, changes had taken place and that some, at any rate, of my names were out of date. None of our local entomologists could help me and I wrote to Mr. Hy. J. Turner pointing out my difficulty, and asking for advice. Mr. Turner has very kindly offered to put me right and I am very grateful to him.

Neurotoma flaviventris, Retz.—This I have come across on one or two occasions and have also bred from larvae taken from the webs where they congregate.

Pamphilius silvarum, Steph.—Fairly common in the Brampton area where, along with

Pamphilius hortorum, Kl.—May be netted on the wing in June.

Pamphilius depressus, Schrnk.—Not so common. Have only taken the ♀.

Cimbex femorata, L.—I have never seen this but include it on account of an interesting old-time record. Mr. T. C. Heysham took it at Carlisle in 1835.

Sirex gigas, L.—I have this from three areas of the county, widely apart. I took one at Heads Nook in the east in 1925, one at Floriston in the north in 1928, and had a specimen sent to me from the vicarage

garden at Drigg in the south west, in 1930. Curiously enough all these are ♀.

Sirex noctilio, Fb.—Of this I have two specimens, a fine ♂ brought to me from a Carlisle timber yard, and a ♀ found among some fire-wood logs bought from a timber yard. These are doubtless specimens imported to the area.

Trichiosoma latreillei, Leach.—I came across this on one or two occasions at Cumwhitton in 1925 and took both ♂ and ♀.

Trichiosoma tibiale, Steph.—Fairly common in some years on hawthorn but have only taken ♂.

Abia sericea, L.—Near Tarn Lodge, 1925, on Devil's Bit Scabious (*Scabiosa succisa*, L.).

Abia fasciata, L.—Fairly common but not so often seen as the preceding species.

Arge ustulata, L.—I very often came across this in July.

Lophyrus pini, L.—Seems fairly frequent on Scots fir.

L. sertifer, Geoffr.—Often met with in our pine woods.

Trichiocampus ulmi, L.—Only one or two specimens, taken at Floriston, north of Carlisle 1921.

Croesus septentrionalis, L.—Does not seem to be common nor to have any special plant. Got by sweeping low herbage near Lanercost.

Holocneme erichsoni, Htg.—Fairly frequent on Larch trees.

Nematinus fuscipennis, Lep. (*abdominalis*, Panz.)—Found occasionally here on alder.

Nematinus acuminatus, C.—On birch, Cumwhitton 1925.

Pteronidea ribesii, Scop.—Too common in some years. In 1914 the gooseberry bushes in some gardens to the north of Carlisle were practically rendered leafless by this.

Pteronidea myosotidis, F.—Appears to be much rarer than the preceding species.

Pteronidea oligospila, Först.—Not so plentiful as the last two species, but not rare.

Amauronematus histrio, Lep., and *A. viduatus*, Zett.—Only taken in one locality, near Lanercost.

Pachynematus clitellatus, Lep. (*caprae*, Pnz.) (= *imperfectus*, Zadd.), *P. xanthocarpus*, Htg., *P. vagus*, F. (= *leucogaster*, Htg.)—Of each of these I have only single specimens.

Pristophora pallipes, Lep.—Appears to be widely spread though nowhere very common.

Lygaeonematus mollis, Htg.—This does not appear to be a common species with us.

Fenusa pumila, Kl. (*pygmaea*, Kl.) (= *betulae*, C.)—Fairly common but apparently local.

Calirsa (*Eriocampoides*) *limacina*, Retz.—A very rare species here apparently.

Holocampa testudinea, Klug.—Swept among rushes, Cumwhitton, 1925.

Mesoneura opaca, F. (= *Dineura verna*, C.)—Near Dalston, 1923.

Periclista albida, Kl. (*melanocephala*, F.)—One specimen in my garden at Kingstown near Carlisle, 1931.

Tomosthetus luteiventris, Kl. (= *fuscipennis*, C.)—Got fairly commonly when sweeping among rushes, Cumwhitton, 1925, Dalston, 1923.

Athalia lineolata, Lep. (= *rosae*, Kl.)—On Bugle (*Ajuga reptans*) and other low growing plants in Netherby woods, 1930.

Selandria serva, F.—Met with in several localities in June.

Selandria strammeipes, Kl.—Scaleby, 1922.

Strongylogaster lineata, Christ. (*cingulata*, Fb.)—Have only taken the ♀ of this, but it appears to be fairly common among bracken in various localities here.

Stromboceros delicatulus, Fall.—This pretty but frail looking species also occurs among bracken here, but is not so commonly met with as the last named species.

Empria (*Poecilosoma*) *liturata*, Gmel. (= *submutica*, C.)—I have only taken one specimen of this.

Allantus (*Emphytus*) *togatus*, Pnz. (= *succinctus*, Kl.) and *A.* (*Emphytus*) *calceatus*, Kl.—Both taken sparingly while *A.* (*Emphytus*) *pallipes*; Spm. (*grossularia*, Kl.)—seems fairly common in every part of the area.

Taxonus agrorum, Fall.—In some years this is fairly common on Germander speedwell (*Veronica chamaedrys*) in June.

Ametastegia (*Taxonus*) *globratus*, Fall.—Probably our commonest sawfly for it appears in the sweep net at almost any time between June and September.

Loderus vestigialis, Kl.—Is rather local in occurrence but quite plentiful where it is found on shallows in May.

Dolerus madidus, Kl. (= *lateritius*, C.)—Seems to be rather scarce.

Dolerus pratensis, L.—A few specimens swept among long grass, along with *Dolerus gonager*, F., in May and June.

Dolerus palustris, Kl. and *Dolerus puncticollis*, Thoms., were taken at Scaleby in 1930.

Dolerus haematodes, Sch.—One of our largest species; was fairly common in 1921, but I have no later record of it.

Dolerus picipes, Kl.—Seems to be fairly common and widely distributed in the area.

Dolerus aeneus, Htg. (= *elongatus*, C.)—Not scarce.

Sciopteryx costalis, F.—Armathwaite, 1925.

Rhogogaster punctulata, Kl.—This stands out as my only sawfly capture during 1924, which was a very bad collecting year in the area, with very few days when collecting outings were possible.

Rhogogaster fulvipes, Scop. (= *lateralis*, C.)—Got on two occasions from aspen in June.

Rhogogaster aucuparice, Kl. (= *gibbosa*, C.)—Not a common species with me.

Rhogogaster viridis, L.—This seems to be one of the commonest species here.

Pachyprotasis variegata, Fall.—Apparently very rare. Have only taken one specimen.

Pachyprotasis rapae, L.—Fairly common.

Macrophya punctum-album, L.—A pretty little insect, which I have occasionally got from privet in June and July. All my specimens are ♀.

Macrophya albicincta, Schrnk.—Two specimens from alder near Carlisle in June, 1932.

Tenthredo (*Allantus*) *scrophulariae*, L.—This pretty wasp-like insect is not scarce here.

T. (Allantus) arcuata, Först.—Fairly common on umbelliferous plants in August.

T. (Allantus) amoenus, Grav. (= *cingulum*, C.).—Apparently very rare. Have only taken the ♂.

Tenthredella temula, Scop. (= *bicineta*, F.).—Not rare.

Tenthredella olivacea, Htg.—The commonest species of the genus here.

Tenthredella mesomelas, L.—Wreay, 1921.

Tenthredella colon, Kl.—Have only taken a ♀ here.

Tenthredella atra, L.—Have only taken var. *dispar*, Klug. myself although Mr. G. B. Routledge told me he had taken the type form.

Tenthredella moniliata, Kl.—Not uncommonly met with.

Tenthredella livida, L.—Came across this on several occasions in 1921-1923, but have not seen it since.

Tenthredella balteata, Kl.—Somewhat scarce, in my experience.

Tenthredopsis literata, Geoff.—Have only one ♂ but the two ♀ forms var. *cordata*, Geoff. and var. *femorialis*, C. appear to be fairly common.

Tenthredopsis coquerbertii, Kl., *T. thornleyi*, Kn., *T. inornata*. Cam., and *T. tristis*, Steph., are none of them scarce.

Scope for our Orthopterists.

By MALCOLM BURR, D.Sc., F.R.E.S.

It is about a century since an unquestioned addition has been made to our meagre list of indigenous Orthoptera. Including one or two questionable cases, we cannot claim more than 30 species, to which we may add 5 earwigs. In France north of Paris there are just about double as many, one or two of which may be with us, and even little Holland has over 50.

But even if we do not add any species, we may at least know something more about the distribution of those we have got. If we take a line from the mouth of the Severn to the Wash, there are out of the 35 only 18 species recorded. Eleven of our species are recorded only south of a line joining the Severn and the Thames estuaries.

For Wales I can find records of 15 species, of Ireland 11, of the Isle of Man 4, and of Scotland only 11, of which one or two are doubtful.

No Blattids yet from Ireland or Scotland; no crickets from Wales; of our 10 *Tettigonidae* Scotland has but one little "ewe lamb," a single specimen—storm-bound specimen—of *L. punctatissima* from the extreme south-west. I am sure there are several species in Scotland, but they require looking for. Ireland has 2.

Much of our ignorance is due not to poverty, but to neglect of the few things we have got. I am convinced that that meagre 18 from north of the Severn-Wash line could be substantially increased. Even in our relatively rich and well-worked south, some of the most characteristic species have not yet been recorded from Somerset and Wiltshire.

I have recently been plotting on the map our known distribution of the Orthoptera, and find that those two counties are usually white islands in a sea of pink. That reproach should be removed in the coming season. *M. grossus*, *G. rufus*, *St. lineatus*, *Ch. albomarginatus*